

IN THE CLAIMS:

Please amend the claims as follows:

Claim 1 (Currently Amended): A solid-state imaging apparatus comprising:
a photosensitive section comprising a semiconductor substrate of a first conductivity type, and a plurality of second conductivity type semiconductor regions arrayed in a two-dimensional pattern on one side of the semiconductor substrate, wherein the semiconductor substrate and each second conductivity type semiconductor region constitute a pn junction to function as a photodiode; and

signal lines for readout of outputs from the photodiodes, which are electrically connected to the photodiodes;
a switch group consisting of a plurality of switches for controlling electrical connection and disconnection between each photodiode and the signal line in each column of the photodiodes;

wires connected to control terminals of the respective switches forming the switch group, and arranged to supply a scan signal to turn each switch off or on in each row of the photodiodes, to the control terminals; and

an electroconductive member provided so as to cover at least the pn junction portions exposed on the one side of the semiconductor substrate,

wherein the electroconductive member is connected to a fixed potential, or is grounded,
and

wherein the wires are located above the electroconductive member so as to overlap the electroconductive member when viewed from a direction of incidence of light.

Claim 2 (Original): The solid-state imaging apparatus according to Claim 1, wherein the electroconductive member is of grid shape when viewed from a direction of incidence of light to the photosensitive section, and is provided so as to cover the pn junction portions exposed on the one side of the semiconductor substrate and portions between the second conductivity type semiconductor regions adjacent to each other.

Claim 3 (Original): The solid-state imaging apparatus according to Claim 1, wherein the photosensitive section further comprises an isolation region formed between the second conductivity type semiconductor regions adjacent to each other, and
wherein the electroconductive member is electrically connected to the isolation region.

Claim 4 (Cancelled)

Claim 5 (Currently Amended): A solid-state imaging apparatus comprising:
a photosensitive section comprising a semiconductor substrate of a first conductivity type, and a plurality of second conductivity type semiconductor regions arrayed in a matrix of M rows and N columns on one side of the semiconductor substrate, wherein the semiconductor substrate and each second conductivity type semiconductor region constitute a pn junction to function as a photodiode;

first wires provided in the respective columns;

a first switch group consisting of a plurality of switches for connection between each photodiode and the first wire in each column;

a vertical shift register for outputting a vertical scan signal to open and close each switch forming the first switch group, in each row;

second wires for connecting control terminals of the respective switches forming the first switch group, to the vertical shift register in each row;

a second switch group consisting of a plurality of switches for connection between each first wire and a signal output line;

a horizontal shift register for outputting a horizontal scan signal to open and close each switch forming the second switch group, in each column; and

an electroconductive member provided so as to cover at least the pn junction portions exposed on the one side of the semiconductor substrate,

wherein the electroconductive member is connected to a fixed potential, or is grounded,
and

wherein the second wires are located above the electroconductive member so as to overlap the electroconductive member when viewed from a direction of incidence of light.

Claim 6 (Original): The solid-state imaging apparatus according to Claim 5, wherein the electroconductive member is of grid shape when viewed from a direction of incidence of light to the photosensitive section, and is provided so as to cover the pn junction portions exposed on the

one side of the semiconductor substrate and portions between the second conductivity type semiconductor regions adjacent to each other.

Claim 7 (Original): The solid-state imaging apparatus according to Claim 5, wherein the photosensitive section further comprises an isolation region formed between the second conductivity type semiconductor regions adjacent to each other, and
wherein the electroconductive member is electrically connected to the isolation region.

Claims 8-10 (Cancelled)

Claim 11 (Currently Amended): A radiographic imaging apparatus comprising:
the solid-state imaging apparatus as set forth in ~~any one of Claims 1 to 10~~ Claim 1; and
a scintillator for converting radiation to visible light, which is provided so as to cover the plurality of photodiodes and be in contact with a light incident surface of the solid-state imaging apparatus.

Claim 12 (New): The solid-state imaging apparatus according to Claim 1, wherein the signal lines are located above the wires so as to place an insulating layer therebetween.

Claim 13 (New): The solid-state imaging apparatus according to Claim 1, wherein the signal lines are located above the second conductivity type semiconductor regions so as to be apart from portions between the second conductivity type semiconductor regions adjacent to

each other and intersect with the second conductivity type semiconductor regions when viewed from the direction of incidence of light.

Claim 14 (New): The solid-state imaging apparatus according to Claim 5, wherein the first wires are located above the second wires so as to place an insulating layer therebetween.

Claim 15 (New): The solid-state imaging apparatus according to Claim 5, wherein the first wires are located above the second conductivity type semiconductor regions so as to be apart from portions between the second conductivity type semiconductor regions adjacent to each other and intersect with the second conductivity type semiconductor regions when viewed from the direction of incidence of light.

Claim 16 (New): A radiographic imaging apparatus comprising:
the solid-state imaging apparatus as set forth in Claim 5; and
a scintillator for converting radiation to visible light, which is provided so as to cover the plurality of photodiodes and be in contact with a light incident surface of the solid-state imaging apparatus.

Claim 17 (New): A radiographic imaging apparatus comprising a solid-state imaging apparatus and a scintillator for converting radiation to visible light, the solid-state imaging apparatus comprising:

a photosensitive section comprising a semiconductor substrate of a first conductivity type, and a plurality of second conductivity type semiconductor regions arrayed in a two-dimensional pattern on one side of the semiconductor substrate, wherein the semiconductor substrate and each second conductivity type semiconductor region constitute a pn junction to function as a photodiode; and

an electroconductive member for discharging a charge generated in a region except for the photodiodes, to the outside,

wherein the electroconductive member is provided above the pn junction portions so as to cover at least the pn junction portions exposed on the one side of the semiconductor substrate, and is connected to a fixed potential, or is grounded, and

wherein the scintillator is provided so as to cover the plurality of photodiodes and be in contact with a light incident surface of the solid-state imaging apparatus.